

SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: KOLTERMAN, Orville G.  
YOUNG, Andrew A.  
RINK, Timothy J.  
BROWN, Kathleen Ann Keiting
- (ii) TITLE OF INVENTION: METHODS FOR REGULATING  
GASTROINTESTINAL MOTILITY
- (iii) NUMBER OF SEQUENCES: 30
- (iv) CORRESPONDENCE ADDRESS:
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  - (D) STATE: CALIFORNIA
  - (E) COUNTRY: USA
  - (F) ZIP: 90017
- (v) COMPUTER READABLE FORM:
  - (A) MEDIUM TYPE: Floppy disk
  - (B) COMPUTER: IBM PC compatible
  - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
  - (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
- (vi) CURRENT APPLICATION DATA:
  - (A) APPLICATION NUMBER: 08/302,069
  - (B) FILING DATE: 07-SEP-1994
  - (C) CLASSIFICATION: Pending
- (vii) PRIOR APPLICATION DATA:
  - (A) APPLICATION NUMBER: 08/118,381
  - (B) FILING DATE: 07-SEP-1993
- (viii) ATTORNEY/AGENT INFORMATION:
  - (A) NAME: DUFT, BRADFORD J.
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  - (C) REFERENCE/DOCKET NUMBER: 209/146
- (ix) TELECOMMUNICATION INFORMATION:
  - (A) TELEPHONE: 619/552-2200
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(2) INFORMATION FOR SEQ ID NO:1:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 37 amino acids

(B) TYPE: amino acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(B) LOCATION: 2,7  
(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues  
(B) LOCATION: 37  
(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu	
1				5					10					15		
Val	His	Ser	Ser	Asn	Asn	Phe	Gly	Pro	Ile	Leu	Pro	Pro	Thr	Asn	Val	
			20					25					30			
Gly	Ser	Asn	Thr	Tyr												
			35													

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24 amino acids  
(B) TYPE: amino acids  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(B) LOCATION: 24  
(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Leu	Gly	Arg	Leu	Ser	Gln	Glu	Leu	His	Arg	Leu	Gln	Thr	Tyr	Pro	Arg	
1				5					10					15		
Thr	Asn	Thr	Gly	Ser	Asn	Thr	Tyr									
			20													

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 amino acids  
(B) TYPE: amino acid

- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

```

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1      5      10      15
Val Arg Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Ser Thr Asn Val
      20      25      30
Gly Ser Asn Thr Tyr
      35

```

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (B) LOCATION: 1,6
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 36
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

```

Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val
1      5      10      15
His Ser Ser Asn Asn Phe Gly Ala Ile Leu Ser Ser Thr Asn Val Gly
      20      25      30
Ser Asn Thr Tyr

```

## (2) INFORMATION FOR SEQ ID NO:5:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: peptide

## (ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

```

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1      5      10      15
Val His Ser Ser Asn Asn Phe Gly Ala Ile Leu Pro Ser Thr Asn Val
      20      25      30
Gly Ser Asn Thr Tyr
      35

```

## (2) INFORMATION FOR SEQ ID NO:6:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: peptide

## (ix) FEATURE:

- (B) LOCATION: 1,6
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 36
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

```

Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val
1      5      10      15
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```

Arg Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Ser Thr Asn Val Gly  
                   20                                  25                                  30  
 Ser Asn Thr Tyr  
                   35

(2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 37 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (ix) FEATURE:
  - (B) LOCATION: 2,7
  - (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
  - (B) LOCATION: 37
  - (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu  
 1                                  5                                  10                                  15  
 Val His Ser Ser Asn Asn Phe Gly Pro Val Leu Pro Pro Thr Asn Val  
                                   20                                  25                                  30  
 Gly Ser Asn Thr Tyr  
                   35

(2) INFORMATION FOR SEQ ID NO:8:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 37 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (ix) FEATURE:
  - (B) LOCATION: 2,7
  - (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

```
Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1          5          10          15
Val Arg Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Pro Thr Asn Val
          20          25          30
Gly Ser Asn Thr Tyr
          35
```

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 36 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(B) LOCATION: 1,6

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 36

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

```
Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val
1          5          10          15
Arg Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Pro Thr Asn Val Gly
          20          25          30
Ser Asn Thr Tyr
          35
```

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 36 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(B) LOCATION: 1,6

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 36

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu	Val
1				5					10					15	
His	Ser	Ser	Asn	Asn	Phe	Gly	Pro	Ile	Leu	Pro	Pro	Thr	Asn	Val	Gly
			20					25					30		
Ser	Asn	Thr	Tyr												
			35												

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu
1				5					10					15	
Val	His	Ser	Ser	Asn	Asn	Leu	Gly	Pro	Val	Leu	Pro	Pro	Thr	Asn	Val
			20					25					30		
Gly	Ser	Asn	Thr	Tyr											
			35												

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 amino acids

- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

```

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1          5          10          15
Val His Ser Ser Asn Asn Leu Gly Pro Val Leu Pro Ser Thr Asn Val
          20          25          30
Gly Ser Asn Thr Tyr
          35

```

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (B) LOCATION: 1,6
- (D) OTHER INFORMATION: disulfide bridge between the Cys residues
- (B) LOCATION: 36
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

```

Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val
1          5          10          15
His Ser Ser Asn Asn Leu Gly Pro Val Leu Pro Ser Thr Asn Val Gly
          20          25          30
Ser Asn Thr Tyr
          35

```



(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu
1				5					10					15	
Val	Arg	Ser	Ser	Asn	Asn	Leu	Gly	Pro	Val	Leu	Pro	Ser	Thr	Asn	Val
			20					25					30		
Gly	Ser	Asn	Thr	Tyr											
			35												

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu
1				5					10					15	
Val	Arg	Ser	Ser	Asn	Asn	Leu	Gly	Pro	Ile	Leu	Pro	Pro	Thr	Asn	Val
			20					25					30		

Gly Ser Asn Thr Tyr  
35

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu
1				5					10					15	
Val	Arg	Ser	Ser	Asn	Asn	Leu	Gly	Pro	Ile	Leu	Pro	Ser	Thr	Asn	Val
		20						25					30		
Gly	Ser	Asn	Thr	Tyr											
				35											

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu
1				5					10					15	

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Ile His Ser Ser Asn Asn Leu Gly Pro Ile Leu Pro Pro Thr Asn Val  
                   20                                  25                                  30  
 Gly Ser Asn Thr Tyr  
                   35

(2) INFORMATION FOR SEQ ID NO:18:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 37 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (ix) FEATURE:
  - (B) LOCATION: 2,7
  - (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
  - (B) LOCATION: 37
  - (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu  
 1                  5                                  10                                  15  
 Ile His Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Pro Thr Asn Val  
                   20                                  25                                  30  
 Gly Ser Asn Thr Tyr  
                   35

(2) INFORMATION FOR SEQ ID NO:19:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 36 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (ix) FEATURE:
  - (B) LOCATION: 1,6
  - (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
  - (B) LOCATION: 36
  - (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Ile  
1 5 10 15  
His Ser Ser Asn Asn Leu Gly Pro Ile Leu Pro Pro Thr Asn Val Gly  
20 25 30  
Ser Asn Thr Tyr  
35

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu  
1 5 10 15  
Ile Arg Ser Ser Asn Asn Leu Gly Ala Ile Leu Ser Ser Thr Asn Val  
20 25 30  
Gly Ser Asn Thr Tyr  
35

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

```
Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1          5          10          15
Ile Arg Ser Ser Asn Asn Leu Gly Ala Val Leu Ser Pro Thr Asn Val
20          25          30
Gly Ser Asn Thr Tyr
35
```

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

```
Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1          5          10          15
Ile Arg Ser Ser Asn Asn Leu Gly Pro Val Leu Pro Pro Thr Asn Val
20          25          30
Gly Ser Asn Thr Tyr
35
```

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Thr	Asn	Phe	Leu
1				5					10					15	
Val	His	Ser	Ser	His	Asn	Leu	Gly	Ala	Ala	Leu	Leu	Pro	Thr	Asp	Val
			20					25					30		
Gly	Ser	Asn	Thr	Tyr											
			35												

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Thr	Asn	Phe	Leu
1				5					10					15	
Val	His	Ser	Ser	His	Asn	Leu	Gly	Ala	Ala	Leu	Ser	Pro	Thr	Asp	Val
			20					25					30		
Gly	Ser	Asn	Thr	Tyr											
			35												

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 1,6
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 36
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Thr	Asn	Phe	Leu	Val
1				5				10					15		
His	Ser	Ser	His	Asn	Leu	Gly	Ala	Ala	Leu	Pro	Ser	Thr	Asp	Val	Gly
			20				25						30		
Ser	Asn	Thr	Tyr												
			35												

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Thr	Asn	Phe	Leu
1				5					10					15	

Val Arg Ser Ser His Asn Leu Gly Ala Ala Leu Ser Pro Thr Asp Val  
                   20                                  25                                  30  
 Gly Ser Asn Thr Tyr  
                   35

(2) INFORMATION FOR SEQ ID NO:27:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 37 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Thr Asn Phe Leu  
 1                  5                                  10                                  15  
 Val Arg Ser Ser His Asn Leu Gly Ala Ile Leu Pro Pro Thr Asp Val  
                   20                                  25                                  30  
 Gly Ser Asn Thr Tyr  
                   35

(2) INFORMATION FOR SEQ ID NO:28:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 37 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues



(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

```
Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Thr Asn Phe Leu
1          5          10          15
Val Arg Ser Ser His Asn Leu Gly Pro Ala Leu Pro Pro Thr Asp Val
          20          25          30
Gly Ser Asn Thr Tyr
          35
```

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 25
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

```
Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu Gln Thr Tyr Pro
1          5          10          15
Arg Thr Asn Thr Gly Ser Asn Thr Tyr
          20          25
```

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 25
- (D) OTHER INFORMATION: amidated Pro (Prolinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu Gln Thr Tyr Pro  
1 5 10 15  
Arg Thr Asn Thr Gly Ser Gly Thr Pro  
20 25